

Anticipating a Better Day: How Respite Reduces Health Risks Among Family Caregivers

As the 6th leading cause of death, dementia will kill more Americans in 2014 than breast or prostate cancer combined. One of the worst aspects of the disease is the insidious impact on the family members who care for their loved ones. More than 15 million people provide care to someone with dementia, including Alzheimer's disease. These caregivers must be continually vigilant and on-call virtually around the clock. Many cannot leave their relatives home alone, due to the person's need for help on simple daily tasks like going to the bathroom or due to the potential danger that leaving them alone brings, such as leaving the stove on or getting lost outside of the house. Many are also aware that at any moment they may have to manage their relative's behavior: mood outbursts ranging from depression to anger and restlessness caused by inactivity or confusion.

This constant pressure of providing care can erode a caregiver's physical and emotional health. Evidence from several studies indicates that caregivers, particularly those in intense care situations, have high rates of depression and greater risks of diabetes, heart diseases, and dementia themselves, as well as a risk of dying earlier, compared to similar people the same age who are not involved in caregiving.

On a biological level, chronic caregiving stress causes a cascade of responses that are precursors of illness, including increased inflammation, weakened immune function and dysregulation of various stress hormones, such as cortisol. The ability to measure these physical indicators of stress provides an opportunity to understand how stress affects health in caregivers. Perhaps more importantly, we are able to determine if interventions for caregivers reduce the health risks associated with chronic stress.

We did just that in a new study by examining if programs that give caregivers respite from providing care, specifically Adult Day Services, can lead to improvements at the biological level. Adult Day programs were initially designed for people who have dementia to provide structured activities in a safe environment and get them out of the house. However, the programs also benefit the caregivers, who get regular breaks and time away from their demanding care responsibilities.

Our prior research showed that caregivers report less stress when they a break from their daily routine. But we wondered whether these reports were associated with tangible benefits to their health. To assess the question, we examined the daily levels of two stress hormones that are affected by daily stress., cortisol and DHEA-S (Dehydroepiandrosterone-Sulfate). Changes in the daily rhythm of these hormones—too much or too little cortisol throughout the day and over the course of time and too little DHEA-S—can lead to health problems: increased inflammation, inadequate activation of the body's immune system, and increased rates of illness.

We wanted to see how these hormones were affected when caregivers utilized Adult Day Services for their loved ones. To do so, we studied 173 caregivers whose relative attended an Adult Day Program on a regular basis. Over the course of an eight day period, they provided five daily samples of their saliva from which we determined cortisol and DHEA-S levels. The results were surprising. On days when caregivers provided all the care, about half of them had blunted cortisol profiles that resembled the profiles of people who suffer from post-traumatic stress disorder (PTSD) or other chronic stress situations. By contrast, on days when these caregivers used Adult Day Services, they showed a more normal cortisol pattern. Interestingly, this change occurred mostly in the morning *in anticipation* of respite rather than the day following its use.

For the other stress hormone, DHEA-S, higher daily levels are associated with better health and emotional well-being. We found higher levels of DHEA-S on days following Adult Day Services use. Caregivers also reported more positive emotion on these days. In other words, even when they had to return to the relentless demands of caregiving, caregivers felt better and experienced physiological and psychological benefits from a day off.

These results are very promising in demonstrating the protective effects of the use of Adult Day Services on family caregivers' health. Since our research was conducted over a relatively short period of time over the course of a caregiver's experience, we were only able to show changes in precursors of illness, but not if actual long-term health outcomes are better with more respite. But similar to the old adage of "an apple a day keeping the doctor away," perhaps daily use of Adult Day Services can have similar benefits – reducing the adverse effects of stress and helping caregivers provide better care for their loved ones. Or as one caregiver recently told us, "I needed time for myself, without thinking what my loved one was doing."

Moreover, Adult Day Services represents a practical solution to caregiver stress. Programs are widely available throughout the country and are considerably less costly than nursing home care or in-home services. Most programs provide full days of care, enabling caregivers who are employed to keep their jobs. As one caregiver told us, "It gives me such peace of mind to know that my dad is in a safe and stimulating environment while my husband and I are at work." And as our study demonstrates, this kind of relief is not only good for the caregiver's morale, but may play an important role of interrupting the unrelenting build-up of physiological stressors that can reduce the caregiver's risk of illness over the long term.

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